REMARKS

Claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16 and 18-54 are pending where Claims 1, 3, 4, 6-7 and 53-54 have been considered by the examiner while the other claims are not considered by the examiner because they are species not elected by the applicant in response to the election requirements.

In the Office Action, the examiner rejected Claims 1 and 7 under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent No. 6,407,791). The examiner rejected Claims 3, 4, 53 and 54 under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent No. 6,407,791) in view of Watanabe (U.S. Patent No. 6,665,023). Accordingly, the applicant has amended the claims to overcome the rejection by the examiner.

Namely, with respect to the rejection to Claims 1 and 7, the applicant has amended independent Claims 1, 4 and 7 (and 10, 13 and 16 as well) to more clearly differentiate the present invention from the technology disclosed by the cited Suzuki et al. reference. More specifically, the applicant has amended Claims 1, 4 and 7 (and 10, 13 and 16 as well) to include the feature that (1) both of the two kinds of electrode structures defined by (i) and (ii) are formed in one pixel of the active matrix substrate, and (2) in the electrode structure defined by (i), the liquid crystal alignment direction control electrode is excluded in a lower layer of the slit (or circular or polygonal holes).

The feature (1) is supported by the original disclosure of the instant application, for example, at Figure 4, and the corresponding description in the specification where the electrode structure (i) having the slit formed on the transparent pixel electrode 8 without the liquid crystal alignment direction control electrode 15 in the lower layer and the electrode structure (ii) having the slit formed on the transparent pixel electrode 8 with the liquid crystal alignment direction control electrode 15 of specified size. The details of the electrode structure (i) is shown in Figure 2 and the details of the electrode structure (ii) is shown in Figure 3. As seen from Figure 4, both of the electrode structures (i) and (ii) are located within one pixel.

The feature (2) is supported by the original disclosure of the instant application, for example, at Figure 2, and the corresponding description in the specification where the electrode structure (i) having the slit 9 formed on the transparent pixel electrode 8 where unlike the electrode structure shown in Figure 3 where the liquid crystal alignment direction control electrode 15 is provided in the lower layer, there is no liquid crystal alignment direction control electrode 15 in the electrode structure (i).

The cited Suzuki et al. reference does not show these essential feature of the present invention. The cited Suzuki et al. reference is directed to a multi-domain liquid crystal display device having sharp contrast and excellent viewing angle characteristics. The liquid crystal display device disclosed by the cited Suzuki et al.

reference does not have both of the electrode structures (i) and (ii) are located within one pixel. For example, in Figures 1, 22 and 23, the aperture section 74 and the control electrode 73 do not overlap with one another. In other words, the liquid crystal display device of the cited Suzuki et al. reference has only the electrode structure (i) in one pixel. In Figures 8, 17, 37 and 43, the aperture section 74 and the control electrode 73 do overlap with one another. In other words, the liquid crystal display device of the cited Suzuki et al. reference has only the electrode structure (i) in another pixel. Thus, the liquid crystal display device of the cited Suzuki et al. reference is provided with either one of the structure (i) or (ii) in one pixel but not both.

Further, as discussed in the previous response to the office action, in the present invention, because the transparent pixel electrode and the liquid crystal alignment direction control electrode in each pixel of the active matrix substrate are driven separately and independently from one another, it is possible to make the size of the liquid crystal alignment direction control electrode small. This means that it is unnecessary to establish the liquid crystal alignment direction control electrode with use of Indium-Tin Oxide (ITO), thereby enabling to form the liquid crystal alignment direction control electrode and the scan signal wiring on the same layer at the same time. As a consequence, because it is possible to produce the active matrix substrate of the present invention through the same production process for the conventional

active matrix substrate, the production cost will not increase (see page 23, lines 26-29).

In contrast, in the active matrix substrate disclosed by the cited Suzuki et al. reference, both of the transparent pixel electrode and the liquid crystal alignment direction control electrode are made of ITO (column 10, lines 51-53, column 12, lines 41-56, column line 14 lines 17-18, etc.). This is because, as noted above, since the video signal supplied to the pixel electrode is transmitted to the control electrode connected to the thin film transistor (TFT) via the capacitance coupling, it is necessary to increase the size of the liquid crystal alignment direction control electrode. However, if the liquid crystal alignment direction control electrode of large size is established by a metal electrode, which is not transparent, the brightness will be deteriorated because of the decrease of the aperture ratio.

Thus, in the cited Suzuki et al. reference, it is necessary to use ITO for both the transparent pixel electrode and the liquid crystal alignment direction control electrode. Accordingly, it is not possible to form the liquid crystal alignment direction control electrode and the scan signal wiring on the same layer at the same time, which increases the production process. Further, since ITO is expensive material, the production cost will increase.

The cited Watanabe et al. reference is completely silent about the slit (or circular or polygonal holes) with respect to the transparent pixel electrode let alone in the relationship with the

relationship with the liquid crystal alignment direction control electrode.

As discussed above, since the essential feature of the present invention is not shown or suggested by the cited Suzuki et al. reference and the cited Watanabe et al. reference, the applicant respectfully submits that the rejection under 35 U.S.C. 103(a) is no longer applicable to the present invention.

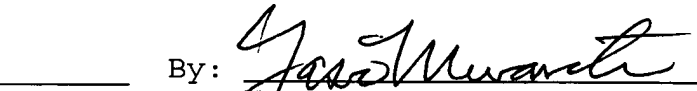
In this opportunity, the applicant has amended the abstract of the disclosure to correct minor wording problems therein. This is to verify that no new matter has been introduced by this amendment.

Under the circumstances, the applicant believes that the present application is in the condition for allowance, and the applicant respectfully requests that the present application be allowed and passed to issue.

Respectfully submitted,

MURAMATSU & ASSOCIATES

Dated: 3/24/09

By: 

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AMD-KN08.003
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